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**“Do not hear what they say.”
A case of the Descriptive Norms applied on eWOM
valence and the Purchase Intention.**

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Preface

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Abstract

In the modern digital age, the role of communication has evolved significantly, impacting individuals, firms, and consumer behavior. This thesis delves into the realm of electronic word of mouth (eWOM) and its profound implications on consumer behavior. Communication between individuals, especially in the context of online reviews, has become an essential component in shaping the choices of consumers and the strategies of marketeers. The sentiment expressed in e-WOM, known as valence, is crucial in determining the impact of these reviews on consumer purchasing intentions.

This thesis, following the footsteps of previous research, investigates the role of eWOM valence in shaping purchase intention. Notably, the research explores deeper into the moderating effect of product type, distinguishing between hedonic and utilitarian products. Moreover, it explores the mediating role of descriptive norms, shedding light on how social influences affect consumer behavior in the context of eWOM.

In pursuit of this inquiry, an online questionnaire was created and consumers were exposed to four distinct scenarios, with different eWOM valence (positive or negative) and concerning different product type (hedonic or utilitarian).

The central findings emerging from the current analysis provide insights into the specific factors and drivers. Initially, the valence of eWOM was found to have a direct impact on purchase intention, for both types of products. However, a stronger indirect effect is found in this relationship and is derived from the descriptive norms. Finally, the type of the product showed a different scale of effect and eWOM valence impacted the descriptive norms. The findings should be considered in the context of this study only.

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1. Introduction

The importance of communication is evident in various aspects in peoples' life and fundamental for both individuals and businesses (Vangelisti , 2016). Communication between a sender and a receiver is defined as the process of transferring certain meanings among two or more individuals (Newstrom & Davis, 1997). Online reviews, as a form of written communication, greatly impact online marketers, companies and customers (Chen & Xie, 2008).

Marketers have long recognized significance of user-generated message. The term 'word of mouth' (WOM) advertising was originally introduced by Ernest Dichter in 1966 to describe the “informal communication between a communicator, someone who is not rewarded for his/her actions, and the receiver, regarding a service, product, or firm”. Electronic word of mouth (eWOM), as a form of communication that connects businesses and potential customers with past customers and is accessible by anyone having electronic access, has been thoroughly researched and has gained significant importance among consumers (Amblee et al., 2017; Packard & Berger, 2017), marketing scholars, and marketing professionals (Liu et al., 2022).

The rapid progress of technology has established a significantly prominent role for the Internet in our daily lives. By 2021, the worldwide count of Internet users had reached a total of 4.54 billion, representing approximately 59% of the global population. The influence of the Internet on individuals' lifestyle is a widely acknowledged phenomenon, leading to a transformation of customers' consumption behaviors (Liu et al., 2022).

As highlighted by Goyal et al. (2019), 61.5% of their study participants indicated that they would check for online reviews. EWOM not only has a clear influence on the revenue, whether positive or negative (Rosario et al., 2016), but also at the same time impacts consumer behavior and purchasing intentions (Nofal et al., 2022; Xu & Jin, 2022). Specifically, consumers are more inclined to hold a favorable view of a brand if they perceive a strong fit between the brand and their own self-concept (Liu et al., 2013).

Valence refers to the emotional qualities that define an experience as either “positive” or “negative” (Colombetti, 2005). Solomon & Stone (2002) adopted the term valence to describe the categorization of reviews. In this context, e-WOM valence signifies the sentiment (negative or positive) of a review within an electronic environment.

Baek et al. (2012) discovered that online reviews, are typically made by individuals who have already made purchases through online shopping websites, distinguishing them from the official product information spread by sellers or manufacturers. Simultaneously, there is a growing trend among consumers to share their retail experiences on online platforms (Floh et al., 2013). Based on these developments, numerous studies (Floh et al., 2013; Chen & Ku, 2021) have examined the impact of online reviews on consumer purchase intention. The studies have yielded compelling findings regarding the impact of valence of online reviews, on consumer purchase intentions. As demonstrated by Lackermair et al. (2013), reviews and ratings serve as a vital source of information for consumers. According to Mudambi & Schuff (2010), reviews represent consumer's point of view and often provide details of their experience with the product. As a result, these reviews are more readily accepted by other consumers, thus facilitating their decision-making process.

The purpose of this thesis is to investigate the impact of electronic word of mouth (eWOM) valence on purchase intention across distinct attributes, moderated by the type of product (hedonic or utilitarian), while taking into account the mediating effect of descriptive norms.

1.1. Research problem and motivation

Nielsen et al. (2016) found that 73% of their respondents utilized online reviews to better define their purchasing intention and the benefits of content created by users, instead of being created by firms. This type of content can create a better, long-term relationship with customers, than if it was created by the firms (Geurin & Burch, 2017). However, the existence of the reviews does not guarantee an effect on consumers per se. Whether the review is credible or not, it affects the decision making of the consumers (Teng et al., 2014).

It is intuitively logical that the reviews are not all aligned, some have positive sentiment and others have negative sentiment. In this sense and following the aforementioned studies, eWOM valence is something to be pointed out. The eWOM valence refers to the sentiment of eWOM (positive/negative). The conflicting nature of online reviews can impact the purchasing intention of the consumers (Rahaman et al., 2022; Gobinda et al., 2019). Moreover, the impact of eWOM valence on purchasing intention is significant (Gobinda et al., 2019).

The importance of eWOM valence on the purchasing intention and at least on some specific firm sales (Morwitz et al., 2007) has drawn the interest of multiple professionals and scholars. This led to various studies that either focused on positive eWOM or on negative, regarding a

product. The impact of positive eWOM valence was found to be greater than the impact of negative eWOM valence (Hajli, 2018). On the contrary, in Anh (2021) the opposite conclusion is suggested.

Although many academics have researched conflicting reviews with positive and negative valence, they have typically focused on the product as a whole. This means that they separate the reviews of a product into positive and negative and study them in that way. In contrast, Jin et al. (2021) centered their research on the attributes of the product. They studied the eWOM valence of individual product attributes. For example, a product may have a negative review for one of its attributes but a positive review for another attribute. Xu & Jin (2022) point out that this kind of research addresses a gap in the study of eWOM valence.

In Qian et al. (2019), the type of product is used as a factor that impacts the purchase intention and specifically, they distinguish the products between Hedonic and Utilitarian, however their study was limited to specific industries. To define product categories, products are divided between hedonic and utilitarian, with the former getting defined as those serving priorities and the latter as those creating emotions, joy and satisfaction when used or possessed (Dhar & Wertenbroch, 2000). In order to address another limitation of the study by Jin & Xiaoxia (2022), multiple occupational and socioeconomical groups from different age groups are included in this research. Moreover, Jin & Xiaoxia (2022) mediated their study by cognitive dissonance. In this study, a different mediator is used, which as mentioned further in this thesis, may have impact on purchase intention. This thesis aims at covering the aforementioned gaps, expanding also the research further, by examining how eWOM valence affects purchase intention, when moderated by the type of goods (hedonic and utilitarian) and mediated by descriptive norms.

1.2 Research objectives

The contribution of this study is connected to the advancement of the previous research in this field. Earlier studies have examined the effect of eWOM on consumer behavior. However, there has been a limited amount of scholarly inquiry into the specific influence of eWOM valence on various product categories, within the framework of the Theory of Planned Behavior (TPB) (Elwalda et al., 2016). Moreover, this study focuses on proxies for social norms (e.g. Descriptive Norms) and employs them as mediators in the relationship between eWOM valence and purchase intention.

The components of the Theory of Planned Behavior have been found to get affected by eWOM valence (Yuniarty et al., 2020). Moreover, TPB has been found to affect the consumer behavior (Liu et al., 2018). The studies mentioned, are conducted in different contexts, however, they imply that TPB can mediate the relationship between eWOM valence and purchase intention. Descriptive norms, being part of TPB can play a significant role in this mediation.

The objective of this thesis is formulated with the bellow research question:

“How does the valence of electronic word of mouth (eWOM) of discrete attributes of hedonic and utilitarian products, affect the purchase intention, considering the mediating role of descriptive norms?”

1.3 Academic and practical relevance

This study has the potential to provide valuable insights, both from academic and a managerial perspective. The insights gained from this research can be applied by Marketing Managers to enhance their knowledge on consumer behavior and develop strategic plans. Moreover, reviews not only provide consumers with valuable information about products and services but also grant companies the opportunity to analyze and extract insights from the feedback provided by their customers (Tang & Guo, 2015). Marketing Managers can also leverage such information to update their online reputation and minimize potential negative effects (Nee, 2016). Ultimately, the findings of this study may lead to increased profitability and a stronger competitive position for companies, as every company's objective is to guide consumers towards the final stage of the buying process.

The growing demand for online reviews in the decision making process, particularly when making expenses, magnifies the importance of eWOM for businesses. An impressive 92% of the respondents in the study conducted by Fan & Fuel (2016), expressed hesitancy when they could not find online reviews for a product. This finding aligns with the study by Rosario et al. (2016), which examined the impact of e-WOM on businesses and found that this new way of information dissemination had the ability to increase the firm's revenue. This insight can assist businesses in customizing their marketing messages and eWOM strategies to meet the varying needs of different consumer groups. For instance, when promoting a hedonic product like a high-end perfume, businesses can leverage positive eWOM by creating emotional brand

experiences that align with consumers' descriptive norms. Conversely, for utilitarian products like a vacuum cleaner, the emphasis can be on highlighting its functional benefits and effectively managing any negative eWOM that might arise.

This study tries to shed light to eWOM and its impact on purchase intention. It can be beneficial for practitioners to understand whether negative or positive reviews on distinct attributes are sufficient to make a customer prefer one product over another.

1.4 Research methodology

To carry out the research described above, an experiment has been created in order to examine the causal effect of eWOM valence on purchase intention. To implement this experiment, an online questionnaire is utilized as the collection data tool from participants, implemented on the Qualtrics survey platform. In this setup, the questionnaire is structured as a full factorial design, 2 (valence on attributes, attribute A positive, B positive / attribute A negative, Attribute B negative) x 2 (type of product) between subject's design. Thus, four conditions are developed. Ewom valence (independent variable) has the form of positive or negative online reviews, so in this experimental procedure, the review valence is manipulated (positive online reviews vs negative online reviews). Purchase intention (dependent variable) is measured using a seven-point Likert scale (1= strongly disagree to 7 = strongly agree), based on research by Huang (2018).

To measure the descriptive norms of each respondent, questions are posed to evaluate the extend to which friends or family influence the respondent's purchasing behavior. These questions are included in all the conditions previously mentioned. Descriptive norms are measured in a seven-point Likert scale, based on Rhodes & Courneya (2004) which is based on a pre-existing scale recommended by Ajzen (2002). In this context, descriptive norms serve as a variable that is measured. Respondents are randomly assigned to each condition. The responses are measured in a Likert scale from 1 to 7, with one being the least and 7 being the most.

The questionnaire has been completed by respondents of various backgrounds, addressing a limitation observed in the study of Jin & Xiaoxia (2022), where the participants were solely students. The questionnaire also includes demographic questions regarding income, age, and

academic background. Throughout the online survey, an attention check is implemented. The respondents who fail the attention check are excluded from the survey.

1.5 Thesis Outline

This paper is structured as follows: Chapter 2 offers an extensive literature review on eWOM valence, descriptive norms from the Theory of Planned Behavior, and the types of goods. It also formulates the hypotheses of the study. Chapter 3 outlines the research methodology and includes details on the sample size and variables. Chapter 4 includes the data preparation, the assumption checks and the analysis for each hypothesis. Lastly, in chapter 5 all the results of the study are thoroughly interpreted, along with the conclusion, the contribution to existing literature and the limitations of this study.

2. Theoretical Framework

In this chapter, the research emphasizes the current literature and the frameworks that are relevant to the study. The first section of this chapter explores the independent variable, highlighting the findings from existing research. It focuses into the existing research and its implications for the study. The second part provides a deeper understanding of the moderator and the mediator, offering further insights and in-depth analysis. Finally, the chapter presents the theoretical framework that supports this thesis. Additionally, the chapter presents the theoretical framework that underpins this thesis. It not only establishes the relationships among the variables but also discusses why there are indications that support the notion that the proposed relationships have been previously examined and studied.

2.1. eWOM Valence

Word-of-mouth has become more prevalent than ever before, and stands as the most influential information source that consumers rely on (Packard & Berger, 2017). Consumers react differently to positive and negative WOM and both have an asymmetrical impact on emotions, behavioral attitude, and intentions. Specifically, positive WOM has a greater influence on behavioral attitudes and intentions (Martensen & Grønholdt, 2016). EWOM is an important type of communication that cannot be underestimated, as it holds the potential to utilize a more substantial impact on consumer compared to traditional communication tools (Trusov et al., 2009). Similarly, Geurin & Burch (2017) discovered that eWOM had a more significant impact on the long-term relationship with customers compared to traditional firm-generated advertising.

Valence refers to the emotional aspect that determines whether an experience is perceived as positive or negative. In the context of reviews, valence is used to characterize the sentiment of eWOM, indicating whether a review is positive or negative (Colombetti, 2005). This term was introduced by Solomon & Stone (2002) in their work on the evaluation of reviews.

The importance of eWOM valence in the consumer decision-making has been researched in previous literature (Amblee et al., 2017; Packard & Berger, 2017). According to the former, the rise in the popularity of online product reviews, has made their impact on product sales a central topic of interest for researchers in the fields of marketing and information systems. As

a result, there has been a growing body of research aimed at understanding the effects of these reviews on consumer behaviour and purchasing decisions.

In a similar context, Xu & Jin (2022) tested the impact of conflicting online reviews on the purchase intention. In their study they found that such conflicting reviews had negative impact on consumers' psychology and intention to purchase. In their conclusions, they highlight the difference in cognitive dissonance consumers feel when reading a medium review compared to a conflicting review regarding different attributes.

The perception of eWOM valence among online customers varies in significance and intensity, upon factors, like the nature of the online shopping experience, the level of product involvement, and the extent of prior knowledge, as suggested by Coursaris et al. (2018). According to Stephen (2016), online consumers have the ability to utilize various forms of WOM valence to assess products by examining the comprehensive feedback provided by reviewers. The extant literature on WOM valence indicates that neutral WOM constitutes a substantial proportion of the overall volume of eWOM, creating positive and negative WOM. However, its impact on online sales is minimal, as indicated by the research of Godes & Mayzlin (2004) and Hajli (2019).

Recent scholarly research by Mauri & Minazzi (2013) indicated that positive eWOM valence leads to higher purchase intention. However, it is important to note that the study was limited to Italian students in Italy and only within the context of a hotel. Similarly, a study from Ghouri et. al. (2020), supported this finding, as they observed that the increase in eWOM valence is correlated with an increase in purchase intention. However, their sample was 150 respondents and the demographics were not disclosed. Therefore, to expand the current reach of the studies mentioned, this study includes diverse participant groups and examines different products.

Thus, the following hypothesis is formed:

H1: Positive eWOM valence leads to higher intention to purchase than negative eWOM valence.

2.2. Hedonic and Utilitarian Products

Categorization of products can be accomplished by dividing them into search goods and experience goods, as posited by Nelson (1970) and Mudambi & Schuff (2010). This study adopts the typology introduced by Bhat & Reddy's (1998), which distinguishes between hedonic and utilitarian product categories. A product categorized as hedonic is expected to

offer a unique advantage that satisfies hedonic needs related to sensory pleasure and emotional identity, such as happiness and surprise. This aligns with the findings of Bettiga et al. (2020). According to Li et al. (2020), consumers seek to derive pleasure, enjoyment, and amusement when purchasing hedonic products. In contrast, a utilitarian assertion centers on practical benefits. As argued by Bhat & Reddy's (1998), consumers' needs within various product categories can be classified as either functional or symbolic, and brands have the potential to address either of these two types of needs. According to Freud's (1955 in Jones, n.d) claim, hedonic consumption triggers emotional stimulation, which includes a range of affective states such as jealousy, joy, fear, and reputation. On the other hand, Babin et al. (1994) suggest that utilitarian consumption is more rationalistic in nature.

Hypothesis 1 suggests that positive electronic Word of Mouth has a more profound impact on promoting purchase intention compared to negative eWOM. The effectiveness of a review relies on the writer's method of explanation, particularly when considering the diverse classifications of products: Hedonic and Utilitarian (Moore, 2015). Therefore, positive eWOM, which highlights the functional benefits and practical aspects of utilitarian products, is likely to be more persuasive and impactful in driving purchase intention. Given that hedonic products evoke higher levels of pleasure, arousal, and engagement, positive eWOM can still be important in stimulating purchase intention. Nonetheless, since hedonic products are more emotionally driven, negative eWOM may have a stronger impact on purchase intention compared to utilitarian products. Negative reviews can raise concerns or indicate potential drawbacks that align with the emotional nature of hedonic products, making them influential in decision-making process.

Negative eWOM may have a weaker impact on purchase intention compared to positive eWOM for utilitarian products. However, negative eWOM is more likely to have a stronger impact on purchase intention compared to positive eWOM for hedonic products. As mentioned earlier, utilitarian products are assessed based on logical criteria and therefore eWOM valence can be more influential than for hedonic products, which are emotionally driven.

In the study by Qiang et. al (2019), the impact of hedonic and utilitarian products on respondents' purchase intentions was examined, and the type of product was found to be a statistically significant factor. Moreover, they found a higher coefficient for utilitarian products than for hedonic products. However, it is important to note that their study was limited to

respondents from a specific geographic location and focused only on a single product. Therefore, it is expected that the different eWOM sentiments will have varying effects on purchase intention, depending on the type of product. However, as highlighted above, people may rely more on reviews when considering the purchase of a utilitarian product rather than a hedonic one.

Thus, the following hypothesis is formed:

H2: For utilitarian products, eWOM valence impacts more the intention to purchase than for hedonic products.

2.3. Descriptive norms

Descriptive norms are associated with the customary behavior of individuals and serve as a form of social proof regarding the effectiveness of certain behaviors. They represent the norms considered or perceived by people regarding a specific behavior. Lee et al. (2020), suggest that eWOM has normative effects. The normative effects refer to the behaviors other have on a given topic, which in turn can be referred as the descriptive norms. Similarly, in Liu et al. (2020), it is found that perceived value and quality of teaching is affected by eWOM, which, in turn, has a normative effect. It is evident from the above two studies that eWOM affects the perception of normality, which can be a measure of descriptive norms. As a result, positive eWOM is likely to lead to higher descriptive norms, as it is supported by the understanding that individuals tend to conform to others and unconsciously imitate the actions of their peers (Göckeritz et al., 2010; Nolan et al., 2008). Thus, the following hypothesis is formed:

H3: Positive eWOM leads to higher Descriptive Norms than negative eWOM.

This hypothesis suggests that when eWOM is positive, it is more likely to affect the perception of normality compared to when the eWOM valence is negative. In this case, descriptive norms might have a less significant influence on individuals' behavior and intentions compared to when positive eWOM is present.

Negative eWOM, which includes critical or unfavorable reviews, may create a sense of caution or wariness among individuals. When confronted with negative eWOM, individuals might

perceive the behavior associated with those negative reviews as a more prevalent and normative conduct, resulting to higher descriptive norms. Positive eWOM, by conveying social proof and consensus, is expected to strengthen descriptive norms. Similarly, negative eWOM may serve as a form of social proof, as individuals can observe negative reviews and consider them to be indicators of normality. On the other hand, as described above, individuals rely less on social proof and normative behavior to form their own perceptions when the review has no strong sentiment.

The study by Wang & Chu (2021) investigated the influence of social norms, specifically descriptive and injunctive norms, on consumer perceptions and willingness to purchase Certified Functional Foods (CFFs) in Taiwan. According to the study, both descriptive and injunctive norms had a positive effect on consumers' perceptions regarding the effectiveness of CFFs. This indicates that consumers were influenced by the prevailing descriptive norms, which reflect what they observed as common behavior among others, as well as injunctive norms, which reflect the perceived approval or disapproval from significant individuals. These social norms played a significant role in shaping consumer perceptions regarding the effectiveness of CFFs. Furthermore, the study revealed that injunctive norms positively influenced consumer attitudes toward CFFs.

On the other hand, although descriptive norms had a positive effect on perceptions of effectiveness, their impact on consumer attitudes was not significant. This implies that descriptive norms might have a more indirect influence on attitudes, which aligns with the concept of mediation. Notably, the study found that consumer perceptions of the effectiveness of CFFs positively influenced their attitudes toward these products. Consequently, positive attitudes were associated with an increased intention to purchase CFFs. These findings indicate that consumer perceptions act as a mediator between descriptive norms and intention to purchase. Thus, the following hypothesis is developed:

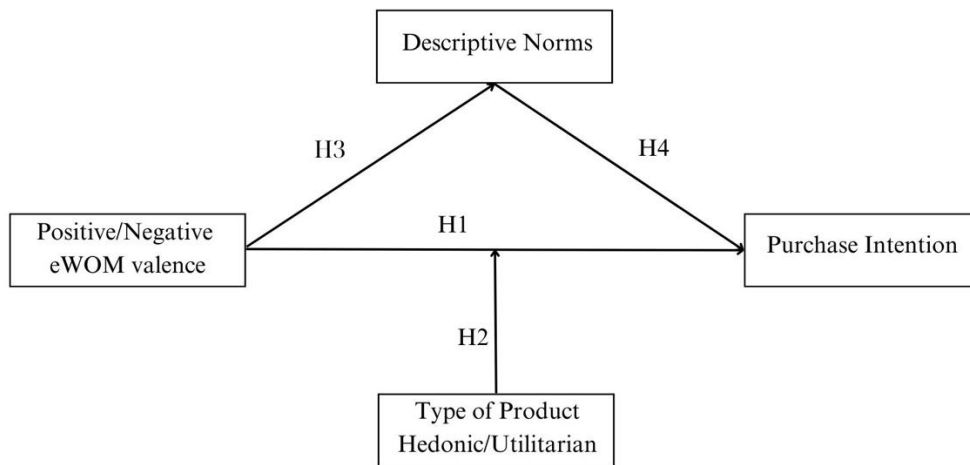
H4: Descriptive norms mediate the relationship between eWOM valence and intention to purchase.

2.4. Conceptual Framework

The last part of the literature review provides an illustration of the conceptual framework of this thesis. Moreover, the hypotheses formed above are refined to present more concisely the relationships examined.

Figure 1

Conceptual Framework diagram



3. Research Methodology

3.1. Research Design & Methodology

As this research aims at evaluating the causal relationship of eWOM valence and purchase intention, this thesis falls within the category of explanatory research. The cause refers to the eWOM valence and the effect on the purchase intention.

The questionnaire is built in the Qualtrics platform. The experimental methodology offers benefits relevant to the causal inference (Imai et al., 2013). Through the experimental research design, the causal relationships among variables can be tested by manipulating the independent variable, eWOM valence, and measuring the dependent variable, purchase intention.

Demographic diversity is another benefit arising from the use of an experiment, in the form of an online questionnaire. By randomly allocating participants to different conditions, the impact of confounding variables can be minimized and the effect of eWOM valence on purchase intention can be isolated. Since people from diverse backgrounds (e.g academic background, income and age range) are assigned randomly to all the four conditions of the study, the outcome should reflect the diversity of these groups rather than representing a specific demographic.

For these reasons, along with the user-friendly format of the Qualtrics questionnaire, this method is considered optimal for achieving the required number of respondents.

Similarly, in the studies by Gobinda et al (2021) and Zhai et al. (2022) , as well as in other studies that focused on the impact of eWOM valence on purchase intention, online questionnaires were utilized proving the validity of this the method in this context. Moreover, in Gobinda et al. (2021), the Qualtrics platform was specifically. The utilitarian product under examination is the same as in Jin & Xiaoxia (2022) where a hotel is used and the two attributes are the hygiene and the services quality. Therefore, the potential combinations of those attributes include: good hygiene (5/7) and good service quality (7/7), as well as poor hygiene (2/7) and bad service quality (1/7).

The hedonic product chosen for this study is a luxury watch, which is characterized by the attributes of a) exclusivity and b) price. These attributes are selected to capture the hedonic aspect of the watch. Thus the possible combinations of those attributes include: very high exclusivity (7/7) and low price (5/7), as well as, low exclusivity (3/7) and high price (1/7).

In the context of the questionnaire, a full factorial is developed with the following characteristics: 2 (Positive eWOM Valence / Negative eWOM Valence) x 2 (type of product, Hedonic or Utilitarian) between subject's design. Thus, 4 conditions are developed.

3.2. Survey Structure & Data Collection

The survey was created online in Qualtrics. The questionnaire was distributed digitally, with a link from the Qualtrics platform and the participants could submit their answers online. The questionnaire was accessible from the 4th of October 2023 until 11th of October 2023.

The initial part of the survey contains the welcoming note, which includes information about the survey, mentions that the responses remain anonymous and are solely used for academic purposes, as well as the estimated time of completion of the survey. At the end of the welcome note, participants are given the option to either consent or not, to participate in the survey. In case they selected "I do not consent", a conditional branch leads to the survey's end.

The second part of the survey consists of the scenario, where participants are asked to imagine that they are about to make a significant purchase decision and that they need to read the reviews that follow. In the third part, participants are randomly assigned to one of the four conditions, each featuring different combinations of eWOM valence and product type. This random assignment ensures that each one is exposed to the intended stimuli. Specifically, participants are exposed to positive or negative electronic Word-of-Mouth (eWOM) reviews related to the two types of product: a utilitarian product (a hotel) or a hedonic product (a luxury watch). The reviews are in the same valence but with slightly different loading. This approach can assure that participants face a clear positive or negative valence, as they encounter either positive or negative reviews.

Each condition is created in a way that simulates realistic online reviews. In the case of the utilitarian product (hotel), the reviews assess two attributes: hygiene and service quality. Two valence conditions are presented as follows:

Condition 1: Bad hygiene (negative) and bad service (negative)

Condition 2: Good hygiene (positive) and good service (positive)

In the case of the hedonic product (luxury watch), participants encounter valence manipulations based on two attributes: exclusivity and price. Specifically, the two valence conditions are presented as follows:

Condition 3: Very high exclusivity (positive) and low price (positive)

Condition 4: Low exclusivity (negative) and high price (negative)

All conditions can be found on Appendix C.

The primary behavioral outcome of interest in this study is participants' purchase intention, which is measured in a 7-point Likert scale, with higher scores indicating higher purchase intention.

After the exposure in each condition, participants are presented with a set of questions, regarding the relevant condition. All questions related to the condition are measured in 7-point likert scale, with some questions displaying response choices in reverse order. Moreover, participants are required to answer every question (force response). To minimize response bias, a randomizer has been implemented so that the questions regarding the variables are presented in random order. Additionally, an attention check question has been included to ensure data quality. Participants who fail the attention check are eliminated from the analysis.

In order to measure response duration, an embedded data set (Q_TotalDuration) is included in the survey flow, right after the scenario. This might also identify potential outliers in response times. Each condition is randomly presented and the randomizer presents evenly the elements (conditions). The last section of the survey represents the control variables (age, education level, income), followed by a "Thank you" note after participants have submitted all the answers. Please refer to Appendix B, C, for the survey flow and the survey.

3.3. Sampling Method

Deciding on the sampling method and the appropriate sample size along was essential to guide the method. For the estimation of the required number of participants, similar studies were

examined to identify the number of respondents necessary to answer the questionnaire, in order to conduct the experiment. These studies, which shared a similar research topic, were also included in the literature review of this study.

The average number of the selected research papers was 345.28 respondents (Appendix A). The target population of this study aims to be as inclusive as possible, including individuals from various age groups, academic backgrounds and income range. Initially, participants were drawn from an accessible network (convenience sampling), and then by utilizing the snowball sampling procedure, more respondents were enlisted. In essence, the sampling approach is a combination of convenience and snowball sampling. Moreover, considering the recommendation of having at least 30 respondents and this thesis has 4 conditions, a minimum of 120 respondents is suggested.

3.4. The Variables

Purchase Intention

The dependent variable of this thesis is the purchase intention, assessed for both utilitarian and hedonic products. To derive the purchase intention of the respondents, a seven-point Likert scale, as described earlier in chapter, is utilized. This Likert scale follows the model proposed by Huang (2018), assigns the value 1 to “Strongly agree” and 7 to “Strongly disagree”.

Descriptive Norms

The descriptive norms of this study are measured through participants' perception of how their close network would behave. The participants are asked to answer on a seven-point Likert scale how likely it is their network to engage in a specific action. This approach is to the prior research of Neighbors et al. (2008).

3.5 Measures

Table 1

Questions of the Survey and Measurements

Variable	Question Prompt	Literature	Measurement
Purchase Intention	I am likely to purchase this product/service.	Ghouri et. al. (2020)	7-point Likert scale (1: strongly agree; 7: strongly disagree)
	I would purchase this product/service.	Ghouri et. al. (2020)	7-point Likert scale (1: strongly agree; 7: strongly disagree)
Descriptive Norms	I believe that many people who are very important to me would purchase this product/service	Wang & Chu (2021)	7-point Likert scale (1: strongly agree; 7: strongly disagree)
	If I were to purchase a product/service, I would consider one that people close to me would purchase.	Tardin & Pelisari (2021)	7-point Likert scale (1: strongly agree; 7: strongly disagree)
	I think that the average person from my network would consider purchasing this product/service.	Borsari & Carey (2003)	7-point Likert scale (1: strongly agree; 7: strongly disagree)
Control Variables	Age range		Multiple choice
	Education level		Multiple choice
	Income range		Multiple choice

3.6 Data Analysis

For the analysis of this study, the SPSS software is employed. To test the hypotheses H1 and H2 an ANOVA analysis is utilized. For the mediation analysis, the PROCESS marco by Hayes is used. The use of ANOVA is preferred to other methods due to its simplicity and suitability in this specific case. ANOVA is effective in reducing error variance in experimental data,

which can increase statistical power and precision. Moreover, this method facilitates the control for covariates, such as the descriptive norms in this case. Lastly, ANOVA allows for the examination of both main and interaction effects of categorical variables on a continuous dependent variable, facilitating a more thorough data analysis. To perform the ANOVA analysis, the following assumptions tests are applied:

- 1) **Normality test.** To assess normality, both the Kolmogorov-Smirnov and Shapiro-Wilk test is employed.
- 2) **Homogeneity of Variances test.** This test examines whether the variance of the dependent variable is equal across all groups of the independent variable. To assess this, the Levene's test is used.
- 3) **Autocorrelation test.** The Durbin-Watson test is utilized, in order to indicate the independence between the errors.

In case the ANOVA assumptions are not met due to the presence autocorrelation, the non-parametric alternative, the Kruskal-Wallis test, will be used to examine H1 and H3. H2 is answered with a two-way ANOVA. Moreover, H4 is explored by applying the PROCESS macro by Hayes.

4. Results

In his chapter, the procedures undertaken to ensure the appropriateness of the data are presented. It includes the calculations of the main descriptive statistics for each condition, followed by primary data analysis. Furthermore, this chapter incorporates the reliability checks, the descriptive statistics, factor analyses, expands on the assumptions and elaborates on the main body analysis. Moreover, potential response exclusions criteria (i.e. outliers etc) are estimated. For all statistical tests an alpha level of .05 (5%) is used.

4.1. Data Preparation

The survey was available in the Qualtrics platform from October 4, 2023 until October 11, 2023 and in total 222 responses have been recorded. These were allocated in the four conditions as presented below:

57 responses for positive eWOM valence and the utilitarian product

58 responses for negative eWOM valence and the utilitarian product

52 responses for positive eWOM valence and the hedonic product

55 responses for negative eWOM valence and the hedonic product

In total, 54 responses were excluded from the final dataset. Specifically, two responses were eliminated as they had selected the “I do not consent” option, which leads to the termination of the survey. Broken down by condition, in the utilitarian product and positive eWOM valence condition, 4 responses were excluded due to survey completion time constraints and 3 due to attention check failure. Moreover, 2 answers were excluded from the data set due to inconsistency (e.g Purchase Intention question=1 and Purchase Intention question=7)(Schell et al., 2022).

In the second condition, 3 answers were excluded due to the total duration of the survey completion and 4 due to attention check failure and 10 more were excluded due to inconsistencies. In the third condition, 2 were excluded due to total duration of the survey completion and 5 due to attention failure and 5 due to inconsistencies. In the fourth condition, 4 were excluded due to total duration of the survey completion and 2 due to attention failure and 10 due to inconsistencies.

Thus a total number of $N = 168$ responses is used for the further analysis and is allocated as shown below:

48 responses for positive eWOM valence and the utilitarian product (28,6%)

41 responses for negative eWOM valence and utilitarian product (24,4%)

40 responses for positive eWOM valence and hedonic product (23,8%)

39 responses for negative eWOM valence and hedonic product (23,2%)

4.2. Descriptive Statistics

From the final pool of $N=168$ eligible answers, 53% received the survey related to the utilitarian product (hotel), while 47% received the survey related to the hedonic product (luxury watch). That showcases the fact that the randomization has been successful, as each of the conditions has around 25% of all the answers. Moreover, after the removal of the disqualified responses, the distribution of responses remained well-balanced. In all the tables 3 decimals are used to allow for future meta analysis.

Table 2

Aggregate Conditions, Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Purchase_Intention_1	168	1	7	3.73	1.803
Purchase_Intention_2	168	1	7	3.83	1.773
Descriptive_Norms_1	168	1	7	4.13	1.704
Descriptive_Norms_2	168	1	7	4.03	1.619
Descriptive_Norms_3	168	1	7	4.77	1.561

The results in the table 2 above indicate that the two purchase intention questions are relatively close ($M_1 = 3.73$, $SD_1 = 1.803$) and ($M_2 = 3.83$, $SD_2 = 1.773$). For the descriptive norms (DN), the first and the second variable are closer, while the third one differs more than the other two. For DN1 ($M_1 = 4.13$, $SD_1 = 1.704$), DN2 ($M_2 = 4.03$, $SD_2 = 1.619$) and DN3 ($M_3 = 4.77$, $SD_3 = 1.561$). The difference between the mean of DN1 and DN3 is 0.64 and between DN2 and DN3 the difference is 0.74.

The table 3 below highlights the Mean and the Standard Deviation of the negative eWOM valence and the positive eWOM valence. The Mean represents the average response on the

Likert scale, while the Standard Deviation measures how close to the Mean the other responses are. A lower Standard Deviation indicates a higher level of alignment within the response group.

Table 3

Descriptive Statistics per Condition

	Utilitarian Negative ($N=41$)				Hedonic Negative ($N=39$)			
	Min	Max	Mean	SD	Min	Max	Mean	SD
PI_1	1	7	2.68	1.619	1	6	2.90	1.586
PI_2	1	6	2.76	1.593	1	7	3.21	1.609
DN_1	1	7	3.27	1.803	1	6	3.31	1.379
DN_2	1	7	3.51	1.804	1	6	3.13	1.321
DN_3	1	7	5.15	1.389	1	7	3.92	1.738
	Utilitarian Positive ($N=48$)				Hedonic Positive ($N=40$)			
	Min	Max	Mean	SD	Min	Max	Mean	SD
PI_1	2	7	5.00	1.111	1	7	4.10	1.823
PI_2	2	7	5.15	1.111	1	7	3.97	1.761
DN_1	3	7	5.27	1.144	2	7	4.45	1.584
DN_2	2	7	5.15	1.031	1	6	4.12	1.505
DN_3	2	7	5.31	1.114	1	7	4.57	1.662

We can observe from the table above that in the positive eWOM valence the means for the Purchase Intention (PI) are higher than those of the negative eWOM valence for both hedonic and utilitarian products. Specifically purchase intention for utilitarian products with negative eWOM valence, PI1 ($M_1 = 2.68$, $SD_1 = 1.619$) and PI2 ($M_2 = 2.76$, $SD_2 = 1.593$). For descriptive norms (DN) for utilitarian products with negative eWOM valence, DN1 ($M_1 = 3.27$, $SD_1 = 1.803$), DN2 ($M_2 = 3.51$, $SD_2 = 1.804$) and DN3 ($M_3 = 5.15$, $SD_3 = 1.389$).

For utilitarian products with positive eWOM valence, PI1 ($M_1 = 5.00$, $SD_1 = 1.111$) and PI2 ($M_2 = 5.15$, $SD_2 = 1.111$). For descriptive norms for utilitarian products with positive eWOM valence, DN1 ($M_1 = 5.27$, $SD_1 = 1.144$), DN2 ($M_2 = 5.15$, $SD_2 = 1.031$) and DN3 ($M_3 = 5.31$, $SD_3 = 1.114$).

Purchase intention for hedonic products with negative eWOM valence, PI1 ($M_1 = 2.90$, $SD_1 = 1.586$) and PI2 ($M_2 = 3.21$, $SD_2 = 1.609$). For descriptive norms for hedonic products with negative eWOM valence, DN1 ($M_1 = 3.31$, $SD_1 = 1.379$), DN2 ($M_2 = 3.13$, $SD_2 = 1.321$) and

DN3 ($M_3 = 3.92$, $SD_3 = 1.738$). For hedonic products with positive eWOM valence, PI1 ($M_1 = 4.10$, $SD_1 = 1.823$) and PI2 ($M_2 = 3.97$, $SD_2 = 1.761$). For descriptive norms for hedonic products with positive eWOM valence, DN1 ($M_1 = 4.45$, $SD_1 = 1.584$), DN2 ($M_2 = 4.12$, $SD_2 = 1.505$) and DN3 ($M_3 = 4.57$, $SD_3 = 1.662$).

To test again if these differences are significant, more analysis is required. Moreover, for the same eWOM valence (positive or negative), utilitarian products have lower (negative eWOM valence) purchase intention means than the hedonic products. Respectively, utilitarian products have higher (positive eWOM valence) purchase intention means than the hedonic products.

However, it has not yet been tested whether these differences are statistically significant and thus the above are merely observations rather than conclusions. To establish the absolute comparisons, further analysis is required.

4.3 Factor Analysis

4.3.1 Validity Test

The study's approach involves conducting a factor analysis, and to determine its suitability, a KMO test (Kaiser-Meyer-Olkin test) and a Bartlett's Test for Sphericity are conducted to validate its appropriateness.

Table 4

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.772
Bartlett's Test of Sphericity	Approx. Chi-Square	452.889
	df	10
	Sig.	<.001

The KMO test suggests that the dataset is well-suited for factor analysis. The high Kaiser-Meyer-Olkin (KMO) measure of 0.772, which Keiser describes as “middling” (Kaiser & Rice, 1974), indicates a substantial portion of shared variance among the variables.

Additionally, Bartlett's Test of Sphericity generated a highly significant result ($p < .001$), which is well below the 0.05 threshold, supporting the rejection of the null hypothesis that the variables are uncorrelated. These findings suggest that the data contains underlying factors that can be meaningfully extracted through factor analysis, making it a robust foundation for further explorations of latent structures within the dataset. It cannot then be concluded that the identity matrix for the variables at hand is equal to the correlation matrix, and a factor analysis is appropriate to perform.

4.3.2 Factor Extraction

Factor extraction was performed using a standard Varimax Rotation method. It is typical to measure through the components' eigenvalues of the rotated component matrix. The threshold value is 1. However this process, yielded a total of one factor and for this reason the number of factors was forced to 2.

The five questions were assigned to the correct factor each with loadings higher than 0.5, as indicated in table 5. For the factor related to purchase intention, the loadings exceeded 0.7, while for the second factor, the loadings were above 0.5.

Table 5

Rotated Factor Matrix

	Factor 1	Factor 2
Purchase_Intention_1	.931	.286
Purchase_Intention_2	.792	.394
Descriptive_Norms_1	.400	.684
Descriptive_Norms_2	.391	.760
Descriptive_Norms_3	.130	.522

A distinct separation on the loadings of factors can be observed for all the variables. None of the variables exhibit high loadings on both factors as the second highest loading stands at 0.4. For the "Descriptive_Norms_3" variable, there is slightly less confidence, given its loading below 0.6. However, since the loading is not lower than 0.4. the factor should not be excluded. Therefore, all the variables are retained for the rest of the analysis.

4.3.3 Reliability Check

Cronbach's Alpha is an indicator of the reliability of factors, with values of 0.7 or higher considered acceptable, and 0.6 also seen as an acceptable lower threshold (Tavakol & Dennick, 2011). Table 6 shows that besides the factors which represent the descriptive norms for the Utilitarian positive and negative condition, as well as for the Hedonic negative condition, the variables have Cronbach's Alpha values ranging from $\alpha = 0.76$ (lower end threshold) to $\alpha = 0.92$.

Table 6

Reliability Check for Extracted Factors

Factor	No. of Components	Cronbach's Alpha
Purchase Intention	2	0.92
Descriptive Norms	3	0.76

Both Cronbach's Alpha are higher than 0.7 and therefore the reliability assumption is met for both factors. It is evident though, that Cronbach's Alpha is higher for the purchase intention variables ($\alpha = 0.92$) than for the descriptive norms variables ($\alpha = 0.76$).

4.4 Assumptions Checks

This section of the study is dedicated to the assumptions check. First, the assumptions checks for the ANOVA analysis are presented, followed by the assumptions checks for the PROCESS macro by Hayes. In cases where the ANOVA assumptions are not met, alternative transformations are tested (e.g. Logarithmic, Arcsin, Ln, squared etc). As a last option, non parametric tests, like the Kruskal-Wallis test, are utilized in case the ANOVA assumptions are not met.

4.4.1 Normality Assumptions

Table 7

Normality Check of the Purchase Intention Variable

	eWOM Valence	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hedonic Product	Negative	.166	41	<.006	.884	41	<.001
	Positive	.180	48	<.001	.912	48	.002
Utilitarian Product	Negative	.160	40	<.011	.934	40	<.021
	Positive	.130	39	<.097	.952	39	.094

Since the sample size is relatively small, the Shapiro-Wilk statistic is preferred over the Kolmogorov Smirnov statistic. In the Shapiro-Wilk test, a significance level greater than 0.05 is required in order to enable the rejection of the alternative hypothesis and to conclude that the variables are distributed normally. However, it is evident from table 7 that, apart from the Purchase Intention for Utilitarian Products ($p = .094$ and $p < .021$), the other variables are not normally distributed. The same result was observed for all the transformations that were tested (Log, Ln, Reciprocal).

Table 8

Tests of Normality of the Descriptive Norms Variable

	eWOM	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
D_Norms	Negative	.095	80	.070	.980	80	.249
	Positive	.137	88	<.001	.925	88	<.001

The preference for the Shapiro-Wilk statistic over the Kolmogorov-Smirnov statistic is driven once again by the relatively small sample size. However, as indicated in table 8, for the negative eWOM valence ($p = .249$), the descriptive norms do not follow a normal distribution in a significance level of 5%, while for the positive eWOM valence ($p < .001$), the descriptive norms are statistically significant. Therefore, the normality assumption has only been proved for positive eWOM valence group and not for the negative one.

4.4.2 Homogeneity of Variance

Table 9

Levene's Test of Equality of Error Variances

		Levene Statistic	df1	df2	Sig.
Purchase	Based on Mean	.040	1	166	.842
Intention	Based on Median	.205	1	166	.651
	Based on Median with adjusted df	.205	1	165	.651
	Based on trimmed mean	.066	1	166	.798

Table 9 presents the results of Levene's Test of Equality of Error Variances for the variable Purchase Intention. We can observe that the significance level Based on Mean is $p = 0.842$. Since the p-value is higher than 0.05, we can conclude that the data of this study meets the criterion of homogeneity.

For the third hypothesis, which assesses the impact of eWOM valence on Descriptive Norms, the following table is formed in order to test the homogeneity of the data.

Table 10

Levene's Test of Equality of Error Variances

		Levene Statistic	df1	df2	Sig.
D_Norms	Based on Mean	.407	1	166	.524
	Based on Median	.591	1	166	.443
	Based on Median and with adjusted df	.591	1	165.840	.443
	Based on trimmed mean	.532	1	166	.467

Table 10 presents the results of Levene's Test of Equality of Error Variances for the variable Descriptive Norms. As observed in the table, the Based on Mean Levene Statistic is statistically significant ($p = .524$), suggesting that there is no significant difference in error variances. Thus we fail to reject the null hypothesis and we can conclude that the data has homogeneity.

4.4.3 Independence Assumption

The independence assumption requires that each group of respondents consists of unique individuals. In the online survey, a randomization was used to ensure that each respondent is assigned to a different condition. Thus, this assumption is met. Nevertheless, it cannot be completely ruled out that a respondent may have retaken the questionnaire since the survey was answered online.

Concluding, even though the Normality assumption is not met (table 7), the Analysis of Variance can be used to test H1, since it is robust.

4.5. Process Assumptions

For the mediation analysis that takes place to test Hypothesis 4 with PROCESS macro by Hayes, the following assumptions are checked.

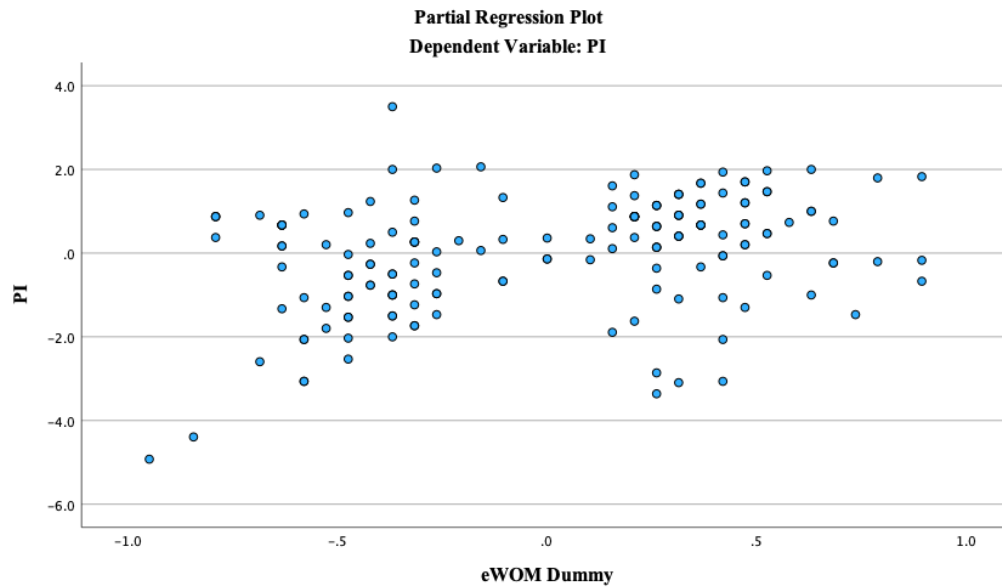
4.5.1 Continuous Independent Variable

It is common to accept in research that Likert scales or ordinal variables with five or more categories to be utilized as if they were continuous variables in various analytical contexts, without significant consequences (Johnson & Creech, 1983; Norman, 2010; Sullivan & Artino, 2013; Zumbo & Zimmerman, 1993). Researchers often refer to such variables as an "ordinal approximation of a continuous variable" and cite the guideline recommending the presence of at least five categories to justify this approach. Ergo, the 7-scale Likert scale used in this thesis complies with this rule and the variables can be considered continuous.

4.5.2 Linear Relationship

Graph 1

Partial Regression Plot



Graph 1 above suggests that even though there is not strong evidence of linear relationship between purchase intention and eWOM valence, there is a mild linear fit.

4.5.3 Outliers

Table 11

Casewise Diagnostics (Outliers Detection)

Case Number	Std. Residual	PI	Predicted Value	Residual
74	-3.111	1.0	4.978	-3.977
150	3.024	6.5	2.634	3.866

Regarding the outliers assumption check, the threshold of three standard deviations was used. Thus, as depicted also in Table 15, these two sets of responses should be excluded for the data in order to proceed with the PROCESS by Hayes.

4.5.4 Independence of Observations

In order to examine the independence of the observations, the Durbin-Watson test is used.

Table 12

Durbin-Watson, Independence of Observations

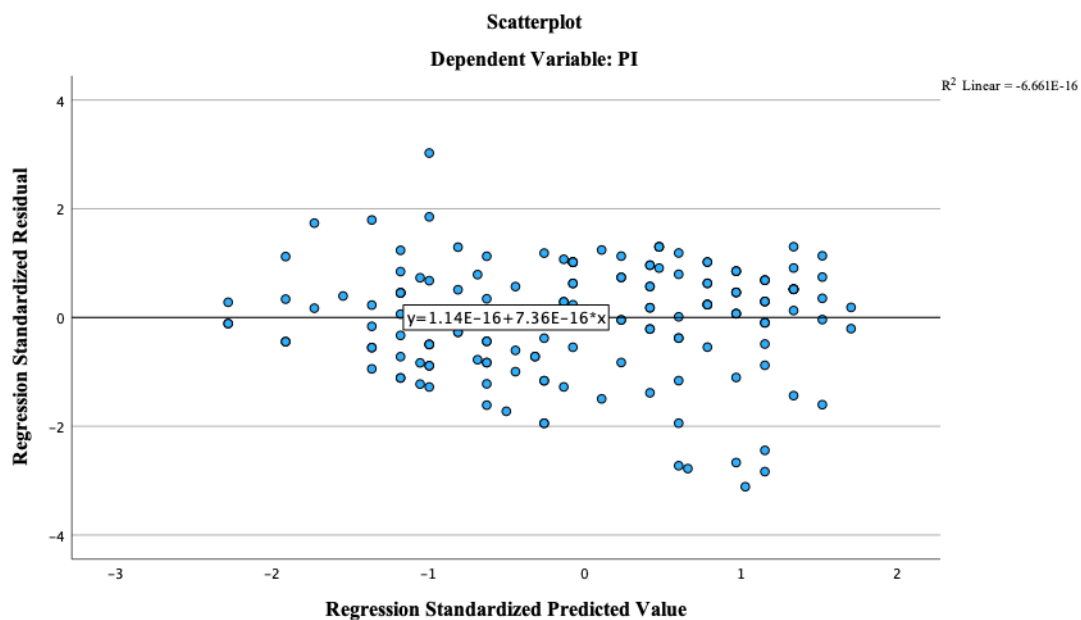
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.674	.454	.448	1.278	2.172

The table above (table 12) indicates that there is no significant autocorrelation in the residuals, since the Durbin-Watson statistic (2.172) is near 2, which as a rule of thumb indicates that is safe to assume that the residuals are independent.

4.5.6 Homoscedasticity

Graph 2

Homoscedasticity Test, Scatterplot



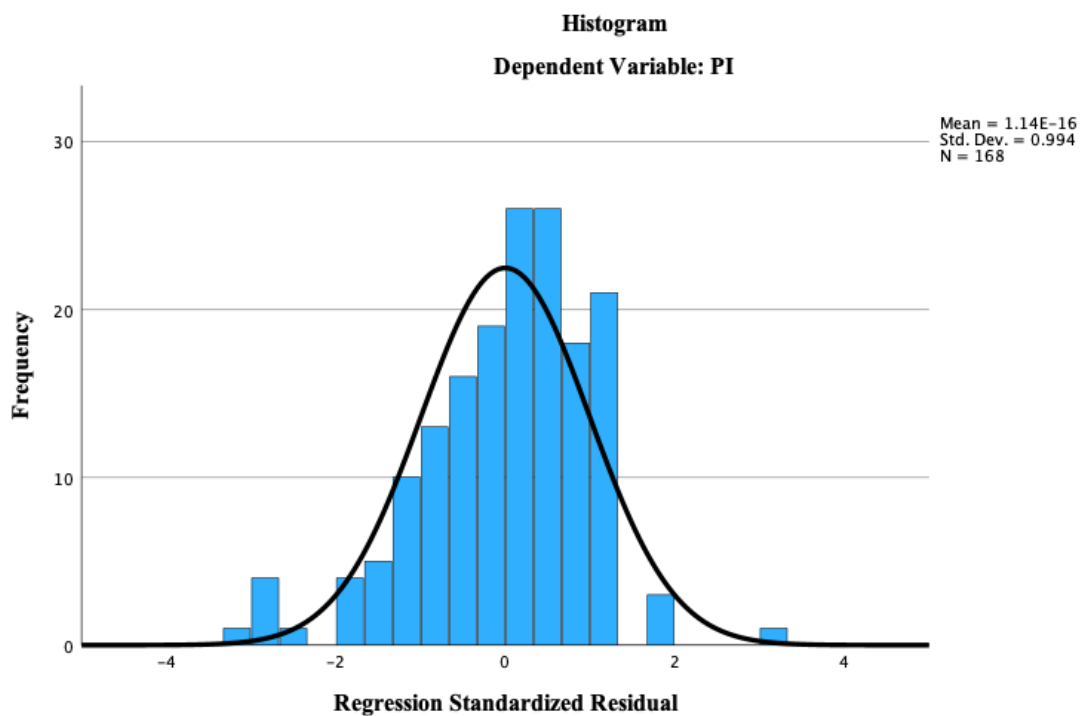
Based on the above scatterplot, there is low evidence of homoscedasticity as the residuals seem to have a varying distance from the line drawn. Therefore, there might be heteroscedasticity indications in this dataset.

4.5.7 Residuals

The residuals appear to be approximately normally distributed as shown in Graph 3. Even though some deviations exist from a normal distribution and the left side of the distribution seems to be more heavy than the right, the overall pattern of the residuals seems to follow a distribution with more substance in the middle and lower in the two tails.

Graph 3

Distribution of Errors



4.6 Analysis

Chapter 5 includes the analysis of the data collected. The three ANOVA models are analyzed first (Hypotheses 1, 2 & 3) and the mediation analysis for Hypothesis 4 follows right after.

4.6.1 Hypothesis 1

The first hypothesis tests whether positive eWOM valence leads to higher intention to purchase than negative eWOM valence. Since the the assumptions mentioned in section 4.4 are mostly met, with the exception of the non-normality, the ANOVA analysis can be performed.

Table 13

Descriptives of ANOVA Regression

	<i>N</i>	<i>Mean</i>	<i>SD.</i>	<i>Std. Error</i>	<i>95% Confidence Interval for Mean</i>		<i>Minimum</i>	<i>Maximum</i>
					<i>Lower Bound</i>	<i>Upper Bound</i>		
Negative	80	2.881	1.501	.167	2.547	3.215	1.0	6.5
Positive	88	4.602	1.485	.158	4.287	4.917	1.0	7.0
Total	168	3.783	1.720	.132	3.521	4.045	1.0	7.0

The 80 participants in the negative eWOM valence group had an average descriptive norm of 2.88 ($SD = 1.5$) and the 88 respondents in the positive eWOM valence group had an average of 4.60 ($SD = 1.72$).

The results of ANOVA were found to be statistically significant with $p < .001$.

Table 14

ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	124.119	1	124.119	55.655	<.001
Within Groups	370.201	166	2.230		
Total	494.320	167			

In Appendix E, the full results of the one way ANOVA can be found. Since only the normality assumption has been violated, we can keep the ANOVA table, presented above as ANOVA is a robust method. It is evident that the mean Purchase Intention of the positive eWOM valence is higher and since the the significance in the table above is lower than 0.001 the difference is statistically significant.

Table 15

Kruskal-Wallis Ranks

	eWOM	N	Mean Rank
PI	Negative	80	59.24
	Positive	88	107.46
	Total	168	

To be more holistic in this thesis, the non-parametric solution of Kruskal-Wallis is also used to re-confirm the findings of the ANOVA. The Kruskal-Wallis parametric, comes up to the same conclusions as ANOVA, as the Mean Rank for the positive eWOM valence is 107.46 and the mean rank for the negative eWOM valence is 59.24.

Therefore, from the above analyses, of both ANOVA and Kruskal Walis and their corresponding tables it is concluded that H1 is accepted.

4.6.2 Hypothesis 2

For Hypothesis 2, a Two-Way ANOVA is performed. Even though the Levene's test provided results that suggest the presence of heterogeneity, the two-way ANOVA is robust and therefore the results are still considered reliable.

Table 16

Levene Test, Two-Way ANOVA for H2

		Levene	df1	df2	Sig.
		Statistic			
PI	Based on Mean	4.909	3	164	.003
	Based on Median	4.234	3	164	.007
	Based on Median and with adjusted df	4.234	3	159.645	.007
	Based on trimmed mean	4.706	3	164	.004

The second hypothesis made in this study is that for the utilitarian products, eWOM valence impacts more intention to purchase than for hedonic products. By including the interaction term in the Two-Way ANOVA, the table below is also presented.

Table 17

Pairwise Comparisons in Two-Way ANOVA

	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
						Lower Bound	Upper Bound
Products Hedonic	Negative	Positive	-.986	.326	.003	-1.630	-.342
	Positive	Negative	.986	.326	.003	.342	1.630
Utilitarian	Negative	Positive	-2.353	.308	<.001	-2.962	-1.745
	Positive	Negative	2.353	.308	<.001	1.745	2.962

Table 17 above shows that the mean difference in purchase intention is statistically significant in both a 5% and 1% confidence interval. It can also be observed that for the utilitarian products ($M_{Positive} - M_{Negative}$) = 2.353 with $p < 0.001$ and for the hedonic products the difference in means is ($M_{Positive} - M_{Negative}$) = 0.986 with $p = 0.003$.

Therefore, since the difference is higher and both are statistically significant, we can also accept H2.

4.6.3 Hypothesis 3

The third hypothesis of this thesis is that positive eWOM valence leads to higher descriptive norms than negative eWOM valence. Assumptions for H3 can be found separately in Chapter 4.4.

Since the only assumption not met is the normality of the descriptive norms and the ANOVA is a robust method, the analysis can be carried on with ANOVA.

Table 18

One-Way ANOVA Descriptives

	N	Mean	SD.	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Negative	80	3.72	1.26	.14	3.43	4.00	1.00	7.00
Positive	88	4.85	1.17	.12	4.60	5.10	1.66	6.66
Total	168	4.31	1.33	.103	4.10	4.51	1.00	7.00

Table 18 showcases that the mean of the descriptive norms is higher for positive eWOM valence ($M_{Positive} = 4.85$, $SD_{Positive} = 1.17$) than for negative eWOM valence ($M_{Negative} = 3.72$, $SD_{Negative} = 1.26$). Moreover, it indicates that there is a statistically significant difference between the positive eWOM valence and the negative eWOM valence group with $p < 0.001$.

Table 19

One-Way ANOVA H3 Significance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.645	1	53.645	36.222	<.001
Within Groups	245.845	166	1.481		
Total	299.489	167			

Therefore, the means of the two groups are different, with the positive eWOM valence group having a higher mean and the difference is statistically significant. Finally, we can conclude that we can accept H3 of this thesis as positive eWOM valence leads to higher descriptive norms than negative eWOM valence.

Table 20

Kruskal Wallis Non-Parametric Analysis

	eWOM	N	Mean Rank
D_Norms	Negative	80	62.06
	Positive	88	104.90
	Total	168	

The non parametric alternative of the Kruskal Walis is used to confirm the results of the ANOVA analysis. Even though the analysis of variance is robust, the non-parametric approach is used to test whether it would confirm the same findings, without the same assumptions required by ANOVA. Since the mean rank of the positive eWOM valence is higher than the mean rank of the negative eWOM valence, Kruskal-Walis leads to the same results as those obtained with ANOVA.

Therefore, we accept H3 of this study as well.

4.6.4 Hypothesis 4

This mediation analysis is performed using the PROCESS macro by Hayes. The assumptions concerning the mediation analysis are discussed in chapter 4.5. Therefore, the PROCESS can be utilized. The output of the PROCESS can be found in the Appendix E.

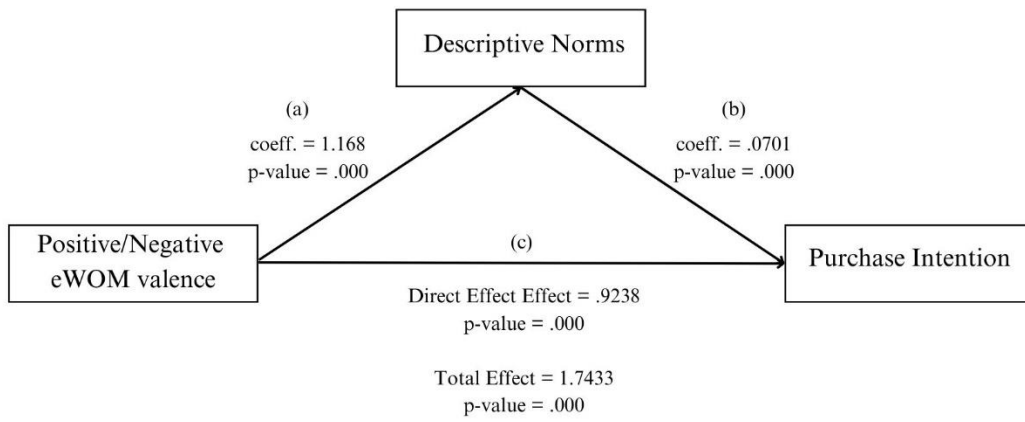
The first table (path a), shows the effect of eWOM valence on descriptive norms. As indicated in the output of the Appendix E, the effect of eWOM valence on descriptive norms is statistically significant ($p = .0000$) and positive. That means that as eWOM valence increases, descriptive norms increase ($coeff = 1.1685$).

Then in the second table of the mediation results, paths (b) and (c) show statistically significant effects, with a p-value of .000. The coefficient of descriptive norms (mediator) on purchase intention is .7013 and the coefficient of eWOM valence on purchase intention is .9238.

Then the final table of the mediation analysis, the total effect of eWOM valence on purchase intention is 1.7433 and is statistically significant ($p = .0000$). The direct effect accounts for .9238 and is statistically significant ($p = .0000$). Moreover, the indirect effect is .8195. The effects can be found also in Figure 2 below.

Figure 2

Mediaton relationships, PROCESS by Hayes



5. Discussion of Results

This chapter offers explanations of the results for each of the four hypotheses that were examined in Chapter 4, as well as concluding remarks, contributions to existing literature, managerial implications, and the study's limitations.

5.1 Hypotheses & RQ Discussion

Four hypotheses were formed in order to break down the research question into its constituent components. These hypotheses explore the impact of descriptive norms and product type on the relationship between eWOM valence and intention to purchase.

For Hypothesis 1, the responses are categorized into those from the positive eWOM valence condition and those from the negative eWOM valence condition. Additionally, responses were separated based on the type of the product. The results reveal that the mean purchase intention for the positive eWOM valence condition, is higher than the mean purchase intention for the negative eWOM valence condition for hedonic products. Furthermore, in the second part of the analysis it is evident that the mean purchase intention for the positive eWOM valence condition, is higher than the mean purchase intention of the negative eWOM valence condition for utilitarian products as well. In summary, positive eWOM valence led to higher purchase intention for both types of products. This finding aligns with existing literature such as Mauri & Minazzi (2013) and Ghouri et. al. (2020), which also suggest an increase in eWOM valence is associated with an increase in purchase intention. This aligns with the expectation that, in general, positive eWOM valence has a positive impact on consumers' purchase intention, regardless the type of product.

For the second hypothesis, a Two-Way ANOVA was employed as a robust tool, overcoming the implications of the homogeneity and normality. The analysis demonstrated that the mean difference between the negative and positive eWOM valence is higher for utilitarian products than for hedonic products. This finding aligns with the research of Qiang et. al (2019), where the coefficient for the utilitarian product was higher than that for hedonic product when measuring purchase intention. However, this study contributes to the previous findings by incorporating wider

geographical scope and more extensive range of products. The reason that the impact of eWOM valence is higher for utilitarian products than for hedonic products, is that respondents may rely more on rational criteria for the former (Babin et al., 1994).

For Hypothesis 3, both for utilitarian and hedonic products, the means of the descriptive norms for positive valence are relatively higher than the means of the descriptive norms for the negative eWOM valence. Furthermore, it is worth mentioning that in the case of utilitarian products, positive eWOM valence impacted more the descriptive norms than in the condition of the hedonic product and positive eWOM valence. This finding aligns with Lee et al. (2020) where the eWOM valence is found to impact the purchase intention, as it forms the normative effects. Similar findings were found in Nolan et al. (2008) as people imitate the normative of others and therefore eWOM valence acts as a means of transpassing its content.

For Hypothesis 4, after conducting a mediation analysis using PROCESS macro by Hayes in SPSS, the results revealed that descriptive norms were found to mediate the relationship of eWOM valence and purchase intention, as shown in Figure 2. All statistical significancies were found highly significant, with an alpha level of 5%. This finding aligns with the study of Wang & Chu (2021), which found that the descriptive norms affect the purchase intention. When combined with the findings of Lee et al. (2020), it suggests that there is a mediation role of descriptive norms on the relationship between eWOM valence and purchase intention. In Appendix E (PROCESS Output), that mediation is proved statistically significant and hence it aligns with existing literature.

The above results indicate that positive eWOM valence has a positive impact on consumers' purchase intention, which is higher for utilitarian products than for hedonic products. Moreover, descriptive norms mediate the relationship of eWOM valence and purchase intention and positive eWOM valence impacts more the descriptive norms regarding the utilitarian products than the hedonic ones.

5.2. Conclusions

In this section the main contribution to the academic and the managerial implications are presented and discussed. Additionally, the limitations to this study and their impact are also presented and further guidelines for future research are provided.

5.2.1 Contribution to Existing Literature and Managerial Implications

This chapter expands on the contribution to the current literature. The first hypothesis explores the effects of eWOM valence on purchase intention. In this hypothesis, the assumptions did not meet all the criteria required to proceed with ANOVA analysis. For this reason, both an ANOVA and a Kruskal-Wallis test were conducted. Both analyses indicated that positive eWOM valence led to higher purchase intention than negative eWOM valence. This finding complements the existing literature by studying a context not previously explored, considering multiple age groups, socio-economic groups and different educational backgrounds.

The second hypothesis examines the impact of the valence on purchase intention in hedonic and utilitarian products. The Two-Way ANOVA, revealed that the impact is higher on utilitarian products than in hedonic ones. For marketers, that creates valuable insights, allowing them to tailor their strategies according to the specific nature of products. For hedonic products, a different strategy can be adopted, as it will not impact significantly the purchase intention.

The findings of the third hypothesis, suggest that higher eWOM valence may encourage individuals to align behaviors with predominant reviews. This effect could potentially create a reviews loop in which individuals align with and thus reinforce positive reviews. This also raises questions about the existence of confirmation bias, in which individuals tend to mimic pre-approved behaviors. From a managerial perspective, a strategy that promotes positive reviews in the beginning may be employed to lead to higher descriptive norms. This in turn could create a halo-effect and impact more individuals. The outcome of this study, provides academics with further insights in the mediation of descriptive norms. Previous studies focused more on the normative effect, whereas the source of the influence was not thoroughly examined. By introducing the descriptive norms, this study establishes a foundation for a deeper understanding of this normative effect (Lee et al. 2020).

In conclusion, the mediation analysis confirmed that descriptive norms mediate the relationship between eWOM valence and purchase intention. The implications of this finding highlight that, through descriptive norms, eWOM valence has a more significant impact on the intention to

purchase than it does directly. Business-wise, this study created a new path for achieving higher purchase intention. Academic-wise the impact is significant for establishing new horizons on the normative research and introducing more specific factors that can mediate the well-studied relationship of eWOM valence and purchase intention.

5.3. Limitations of this Study and Future Research

The limitations of this study refer to technical challenges and offer suggestions for future research that will address topics explored in this study. The main limitation of the study is that even though the first and third hypothesis were approached using both linear and non linear approach such as an approach was not feasible for the second and fourth hypotheses. The mediation analysis performed using PROCESS by Hayes, assumes linearity in the models to subtract values, however, this assumption was not strongly met. The mediation analysis was conducted, however due to limitations in SPSS, other non-parametric approaches might be more insightful and appropriate. Such methods are the Monte Carlo and the permutation based SEM which could lead to higher accuracy, while avoiding violations.

Furthermore, participants in this study were exposed to only two reviews per condition. This might have limited their ability to make a clear decision on whether they would purchase the product or not. Future research could increase the number of the reviews displayed in order to enhance appropriateness. Additionally, the products presented are not branded. Future research could also focus on measuring the moderating role of the product type, taking into account the influence of specific brands.

The demographics are reported in Appendix D. An initial non-parametric analysis of the descriptive norms' rankings based on the level of education, revealed that Ph.D. students presented significantly lower levels than compared to High Schoolers and Bachelor's or Master's students. The latter also presented lower levels compared to of High Schoolers. These findings suggest the possibility that educational level may moderate the relationship between eWOM valence and descriptive norms. Hence, future research could focus on the impact of the educational level on the eWOM valence and purchase intention relationship, further enhancing the topic.

Even though analysis has been conducted with the demographics data, this data has not been used for control in the context of this thesis. It is therefore, suggested for future research to include that aspect of the analysis to generate more holistic results.

Lastly, during the Factor Analysis, the number of factors were forced to be equal to the number of variables. This was made to ensure that the factors found, align with the purpose of the study. Future research, could expand the study in a wider time frame and collect a larger number of responses, which could potentially allow for a natural factor analysis, rather than a forced one.

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Appendix A: Sample Size

Study	# of Participants
Ghuri et al. (2020)	150
Zhai et al. (2022)	227
Gobinda et al. (2021)	200
Babin et al. (1994)	400
Chen et al. (2021)	419
Haijli (2019)	512
Martensen & Gronhold (2016)	509
Average	345.28

Appendix B: Survey Flow

Block: Default Question Block, Welcome Note (1 Question)

Branch: New Branch

If

If Thank you for participating in this survey, which is a crucial part of my Economics and Business... I do not consent Is Selected

EndSurvey:

Standard: Scenario (1 Question)

EmbeddedData

Q_TotalDurationValue will be set from Panel or URL.

BlockRandomizer: 1 - Evenly Present Elements

Standard: Block 1, Condition 1(1 Question)

Standard: Block 2, Condition 2 (1 Question)

Standard: Block 3, Condition 3 (1 Question)

Standard: Block 4, Condition 4 (1 Question)

Standard: Block 5, Question Set (6 Questions)

Standard: Block 6 Control variables (3 Questions)

Appendix C: Survey

Start of Block: Default Question Block

Welcome! Thank you for participating in this survey, which is a crucial part of my Economics and Business master's thesis at Erasmus University Rotterdam. Your responses will remain anonymous and will be solely used for academic purposes.

There are no right or wrong answers, so please answer as truthfully as you can. You'll be presented with one scenario and asked a few questions. The survey should only take about 3 minutes to complete.

If you have any questions, please don't hesitate to contact me at 6368951m@student.eur.nl. To get started, please check the box below to confirm your agreement to participate in this study:

I have read the above and agree to take part in this study.

- I consent
- I do not consent

End of Block: Default Question Block

Start of Block: Scenario

Scenario Imagine for a moment that you are about to make a significant purchase decision.

Your role is to carefully read these reviews, considering the information they provide and the feelings they evoke. Afterwards, you will be asked a series of questions.

Throughout the survey, remember that you are relying solely on the information provided in the reviews.


End of Block: Scenario



Start of Block: Block 1



You are about to book your stay at the following hotel and you encounter the reviews below. Once you read the reviews, press the button at the end of the page to proceed.




Twin Room

2 single beds 





 17 m²  Private bathroom

 Flat-screen TV  Free WiFi

 € 83
Includes taxes and charges

I'll reserve

Reviews

- A Anette** Reviewed: 26 September 2023
-  King Room
 4 nights · September 2023
 Solo traveller
- I walked into my room, and it looked like it hadn't been cleaned in weeks. Dust everywhere, hair in the bathroom and stains on the sheets. Definitely not what I expected.**
(Hygiene Rating: 2/7) ★★☆☆☆☆
- B Bianca** Reviewed: 2 October 2023
-  King Room
 8 nights · September 2023
 Couple
- The staff was unnecessarily rude on several occasions. Seriously and I was just a customer!**
(Services Rating: 1/7) ★☆☆☆☆


End of Block: Block 1

Start of Block: Block 2

You are about to book your stay at the following hotel and you encounter the reviews below. Once you read the reviews, press the button at the end of the page to proceed.



Twin Room

2 single beds 

 17 m²  Private bathroom

 Flat-screen TV  Free WiFi



€ 83

Includes taxes and charges

I'll reserve

Reviews

A Anette

Reviewed: 26 September 2023

 King Room

 4 nights - September 2023

 Solo traveller

There were some minor cleanliness issues in the dining area and on the stairs. They could make some improvements there. However, the rest of the place was so clean that it felt as if someone had cleaned up right after you walked through.

(Hygiene Rating: 5/7) ★★★★★☆☆

B Bianca

Reviewed: 2 October 2023

 King Room

 8 nights - September 2023

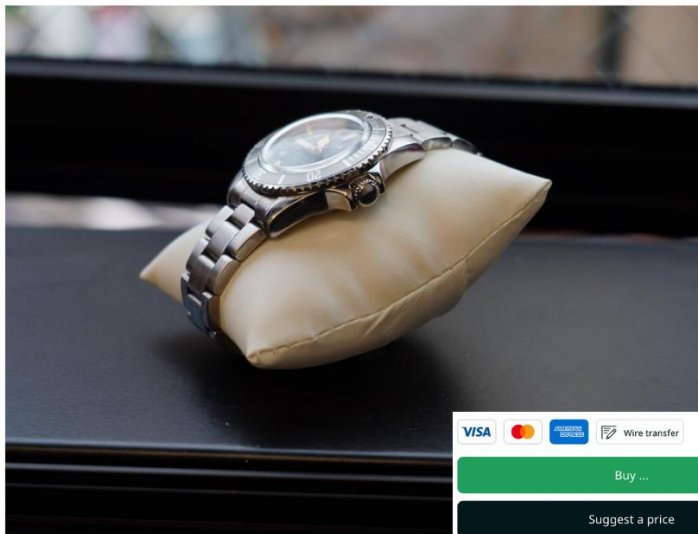
 Couple

The staff and the services were the very best I have encountered so far. Great indeed. Felt they that they enjoyed serving us. (Services Rating: 7/7) ★★★★★★★

End of Block: Block 2

Start of Block: Block 3

You are about to purchase the watch below and you encounter the following reviews. Once you read the reviews, press the button at the end of the page to proceed.



Reference number	126610LN
Dealer product code	126610LN
Movement	Automatic
Case material	Steel
Bracelet material	Steel
Year of production	2023
Condition	<u>Unworn</u> (Mint condition, without signs of wear)
Scope of delivery	Original box, original papers
Location	United States of America, New York, New York City
Price	\$14,480
Availability	Item is in stock

Reviews

Marion Q

Can't feel more premium than that. This is as exclusive as a watch can be.
(Exclusivity Rating: 7/7) ★★★★★★

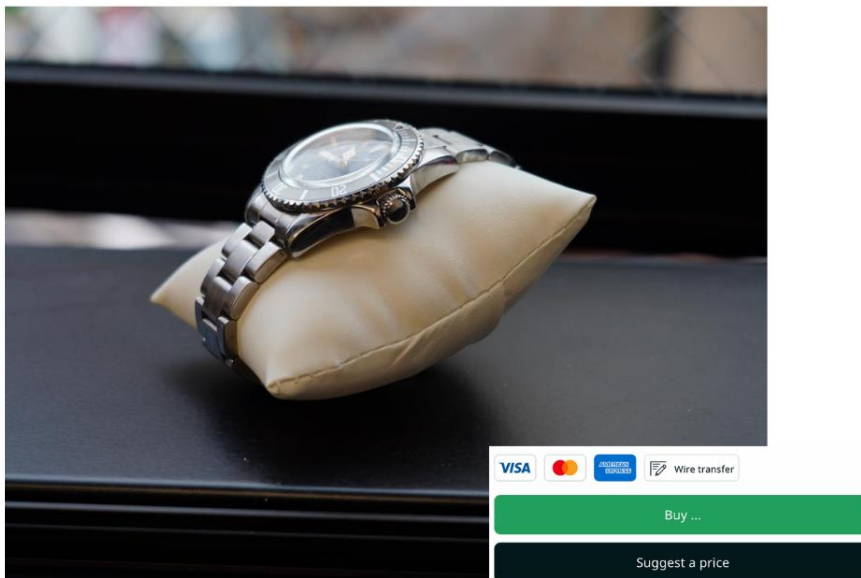
Frank B

There are cheaper luxury watches out there as well as more expensive ones.
It may lean on the cheaper side.
(Price Rating: 5/7) ★★★★★☆☆

End of Block: Block 3

Start of Block: Block 4

You are about to purchase the watch below and you encounter the following reviews. Once you read the reviews, press the button at the end of the page to proceed.



Reference number	126610LN
Dealer product code	126610LN
Movement	Automatic
Case material	Steel
Bracelet material	Steel
Year of production	2023
Condition	Unworn (Mint condition, without signs of wear)
Scope of delivery	Original box, original papers
Location	United States of America, New York, New York City
Price	\$14,480
Availability	Item is in stock

Reviews

Marion Q

If you are into watches, that is the watch you get and that is the reason why it is pretty common . (Exclusivity Rating: 3/7) ★★☆☆☆☆

Frank B

Pricey pricey....It felt like an "OUCH" once I spent the money. (Price rating: 1/7) ★☆☆☆☆

End of Block: Block 4

Start of Block: Block 5

Q1. I am likely to purchase this product/service.

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Page Break

Q2. I would purchase this product/service.

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

Page Break

Q3. I believe that many people who are very important to me would purchase this product/service.

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Page Break

Q4. I think that the average person from my network would consider purchasing this product/service.

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

Page Break

Q5. Please select the option 'Strongly Agree' for this question to confirm you are paying attention.

- Strongly disagree
- Strongly agree

Page Break

Q6. If I were to purchase a product/service, I would consider one that people close to me would purchase.

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

End of Block: Block 5

Start of Block: Block 6 Control variables

Q1. What is your age?

- 18-25
- 26-33
- 34-41
- 42+

Q2. What is the highest educational level you possess?

- High School Diploma
 - Bachelor's Degree
 - Master's Degree
 - Ph.D. or Doctorate
-

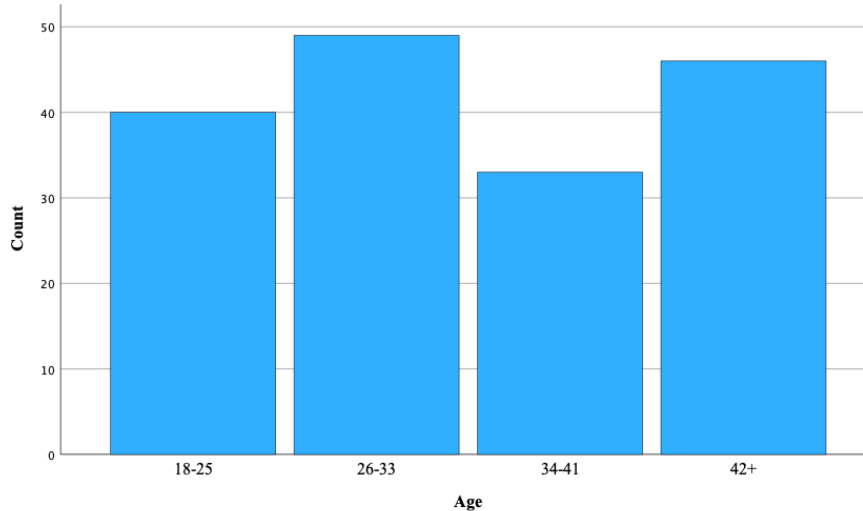
Q3. What is your income?

- Less than €30,000
- €30,000 - €59,999
- €60,000 - €89,999
- €90,000 or more

End of Block: Block 6 Control variables

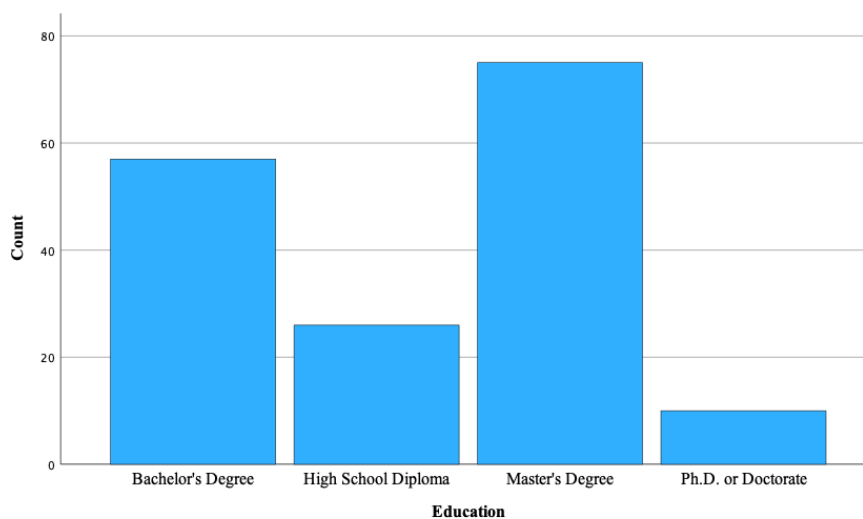
Appendix D: Demographics

Graph 1
Age Demographics



About 29.19% (49) of the final valid respondents were in the 26-33 age group and 27.38% (46) were in the 42 years plus. Then 23.8% (40) were from the 18-25 years group and finally 19.6% (33) from the 34-41 group.

Graph 2
Educational Demographics



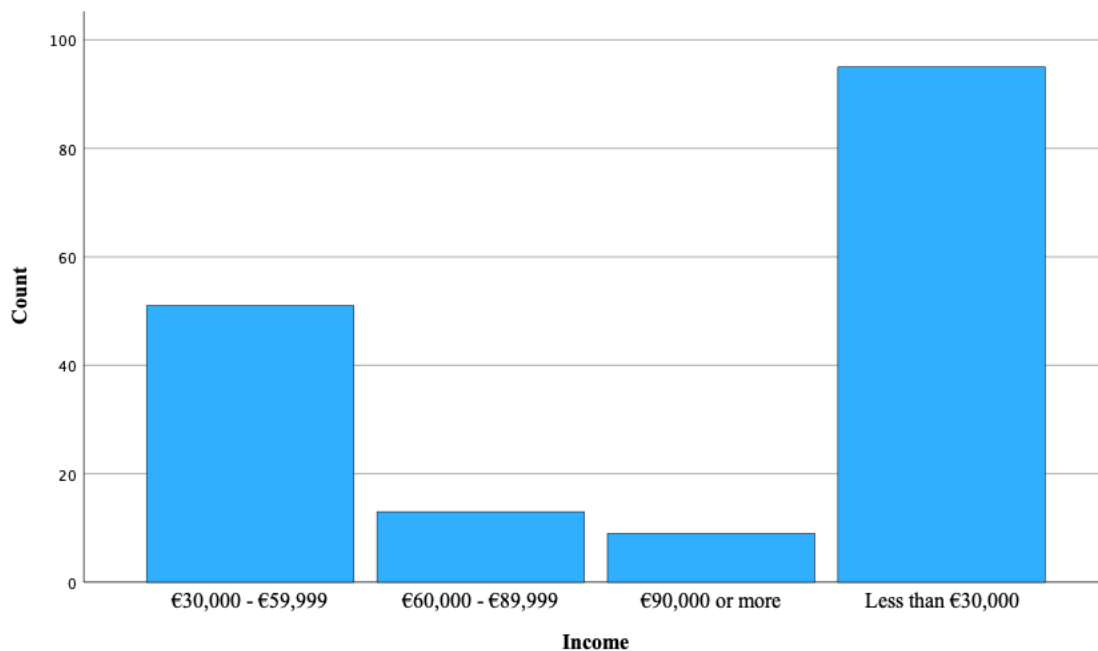
The major educational level is the Master's with 44.6% (75) forming that group. Then the Bachelor's group follows with 33.9% (57). Finally, the highschool diploma group with 15.5% (26) and the Ph.d. group with almost 6% and 10 responses.

Kruskal-Wallis: Educational Level effect on Descriptive Norms

	Education	N	Mean Rank
D_Norms	High School	26	92.06
	Bachelors	57	84.55
	Master's	75	85.05
	Ph.d.	10	60.40
	Total	168	

Another non-parametric analysis has been conducted on the descriptive norms based on the educational level. The high-school students had a mean rank of 92.06 whereas the Ph.d. reported 60.4. This rank depicts the fact Ph.d. students reported lower descriptive norms overall.

Graph 3
Income Demographics



The income distribution of the participants follows a declining trajectory as the income level increases. The vast majority fell in the less than € 30.000 category, representing in total 56.5% (95). The next group of income was under € 59.999 with 30.4% (51) and then the next groups accounted for 7.7% (13) and 5.3% (9) respectively.

Appendix E: SPSS Outputs

Hypothesis 1

One-Way ANOVA Output

Descriptives

All

	N	Mean	SD.	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
eWOM-	80	2.881	1.5016	.1679	2.547	3.215	1.0	6.5
eWOM+	88	4.602	1.4859	.1584	4.287	4.917	1.0	7.0
Total	168	3.783	1.7205	.1327	3.521	4.045	1.0	7.0

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
All	Based on Mean	.040	1	166	.842
	Based on Median	.205	1	166	.651
	Based on Median and with adjusted df	.205	1	165.266	.651
	Based on trimmed mean	.066	1	166	.798

ANOVA

All

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	124.119	1	124.119	55.655	<.001
Within Groups	370.201	166	2.230		
Total	494.320	167			

ANOVA Effect Sizes

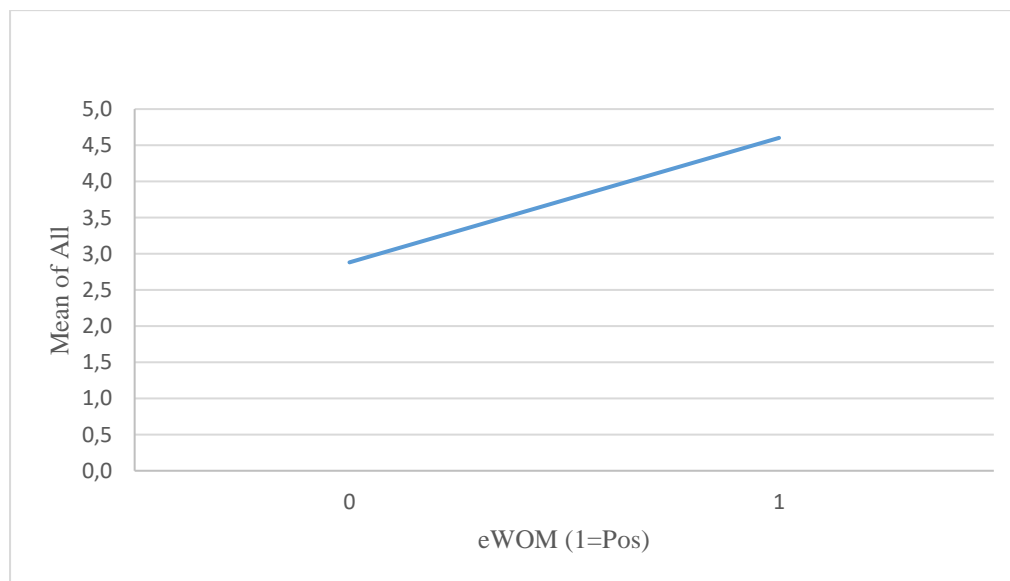
95% Confidence Interval

		Point Estimate	Lower	Upper
All	Eta-squared	.251	.145	.353
	Epsilon-squared	.247	.140	.349
	Omega-squared Fixed-effect	.245	.139	.347
	Omega-squared Random-effect	.245	.139	.347

Robust Tests of Equality of Means

All

	Statistic	df1	df2	Sig.
Welch	55.599	1	164.141	<.001
Brown-Forsythe	55.599	1	164.141	<.001



Hypothesis 2

Two-Way ANOVA Output

Between-Subjects Factors

		N
eWOM	Negative	80
	Positive	88
Products	Hedonic	79
	Utilitarian	89

Descriptive Statistics

Dependent Variable: PI

eWOM	Products	Mean	Std. Deviation	N
Negative	Hedonic	3.051	1.4455	39
	Utilitarian	2.720	1.5534	41
	Total	2.881	1.5016	80
Positive	Hedonic	4.038	1.7372	40
	Utilitarian	5.073	1.0416	48
	Total	4.602	1.4859	88
Total	Hedonic	3.551	1.6652	79
	Utilitarian	3.989	1.7516	89
	Total	3.783	1.7205	168

Levene's Test of Equality of Error Variances^{a,b}

		Levene Statistic	df1	df2	Sig.
PI	Based on Mean	4.909	3	164	.003
	Based on Median	4.234	3	164	.007
	Based on Median and with adjusted df	4.234	3	159.645	.007
	Based on trimmed mean	4.706	3	164	.004

White Test for Heteroskedasticity

Chi-Square	df	Sig.
12.831	3	.005

Breusch-Pagan Test for Heteroskedasticity

Chi-Square	df	Sig.
3.346	1	.067

Tests of Between-Subjects Effects

Dependent Variable: PI

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	149.710	3	49.903	23.749	<.001	.303
Intercept	2310.033	1	2310.033	1099.344	<.001	.870
eWOM	116.342	1	116.342	55.367	<.001	.252
Products	5.165	1	5.165	2.458	.119	.015
eWOM * Products	19.498	1	19.498	9.279	.003	.054
Error	344.610	164	2.101			
Total	2898.250	168				
Corrected Total	494.320	167				

Estimates

Dependent Variable: PI

eWOM	Products	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Negative	Hedonic	3.051	.232	2.593	3.510
	Utilitarian	2.720	.226	2.273	3.167
Positive	Hedonic	4.037	.229	3.585	4.490
	Utilitarian	5.073	.209	4.660	5.486

Pairwise Comparisons

Dependent Variable: PI

	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference		
						Lower Bound	Upper Bound	
Products	eWOM	Negative	Positive	-.986*	.326	.003	-1.630	-.342
		Positive	Negative	.986*	.326	.003	.342	1.630
Utilitarian	eWOM	Negative	Positive	-2.353*	.308	<.001	-2.962	-1.745
		Positive	Negative	2.353*	.308	<.001	1.745	2.962

Univariate Tests

Dependent Variable: PI

Products		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Hedonic	Contrast	19.206	1	19.206	9.140	.003	.053
	Error	344.610	164	2.101			
Utilitarian	Contrast	122.470	1	122.470	58.283	<.001	.262
	Error	344.610	164	2.101			

Estimates

Dependent Variable: PI

eWOM	Products	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Negative	Hedonic	3.051	.232	2.593	3.510
	Utilitarian	2.720	.226	2.273	3.167
Positive	Hedonic	4.037	.229	3.585	4.490
	Utilitarian	5.073	.209	4.660	5.486

Pairwise Comparisons

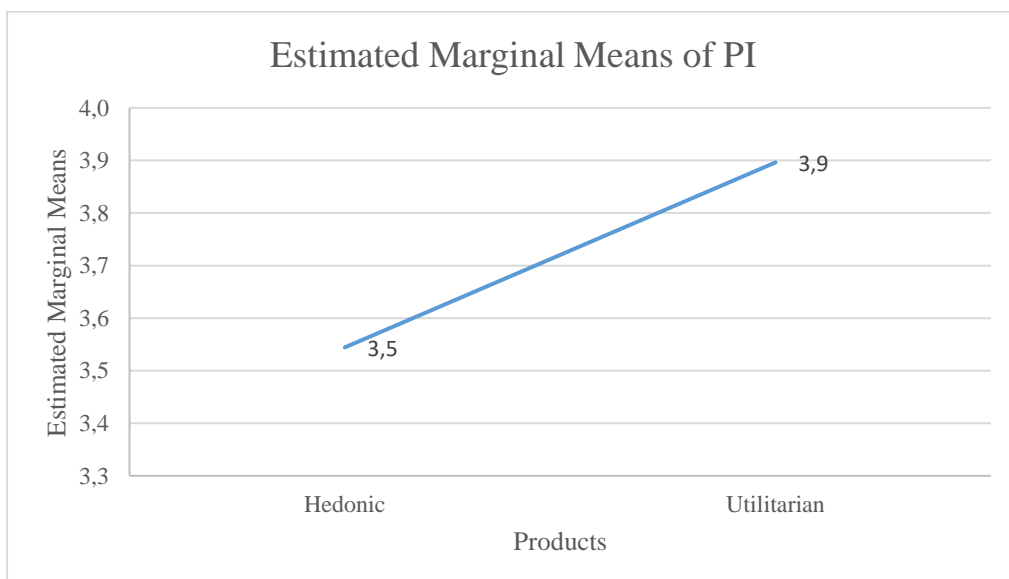
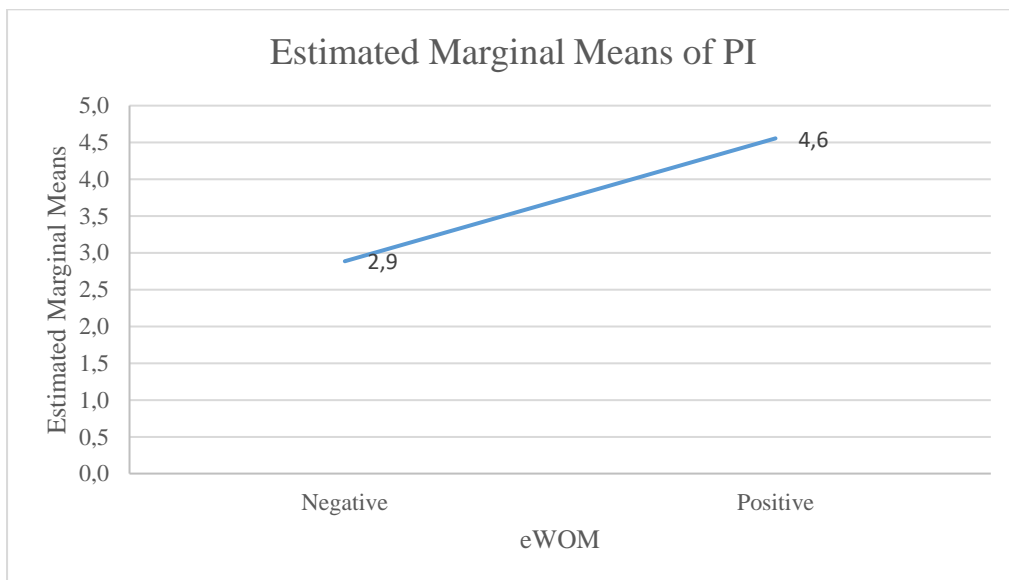
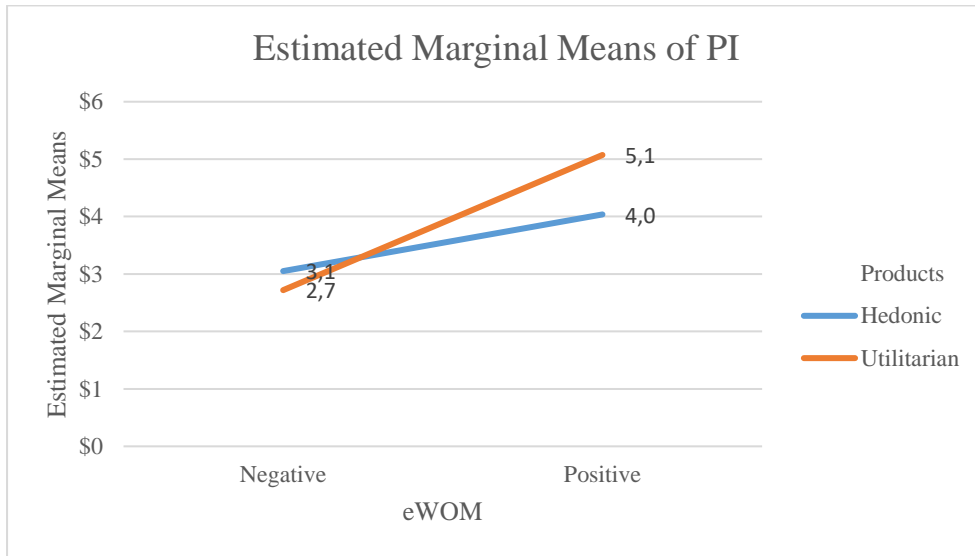
Dependent Variable: PI

eWOM	(I) Products	(J) Products	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
						Lower Bound	Upper Bound
Negative	Hedonic	Utilitarian	.332	.324	.308	-.308	.972
	Utilitarian	Hedonic	-.332	.324	.308	-.972	.308
Positive	Hedonic	Utilitarian	-1.035*	.310	.001	-1.648	-.423
	Utilitarian	Hedonic	1.035*	.310	.001	.423	1.648

Univariate Tests

Dependent Variable: PI

eWOM		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Negative	Contrast	2.200	1	2.200	1.047	.308	.006
	Error	344.610	164	2.101			
Positive	Contrast	23.391	1	23.391	11.132	.001	.064
	Error	344.610	164	2.101			



Hypothesis 3

One-Way ANOVA Output

Descriptives

D_Norms

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	80	3.72	1.26	.14	3.44	4.00	1.00	7.00
1	88	4.85	1.17	.12	4.60	5.10	1.66	6.66
Total	168	4.31	1.33	.10	4.10	4.51	1.00	7.00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
D_Norms	Based on Mean	.407	1	166	.524
	Based on Median	.591	1	166	.443
	Based on Median and with adjusted df	.591	1	165.840	.443
	Based on trimmed mean	.532	1	166	.467

ANOVA

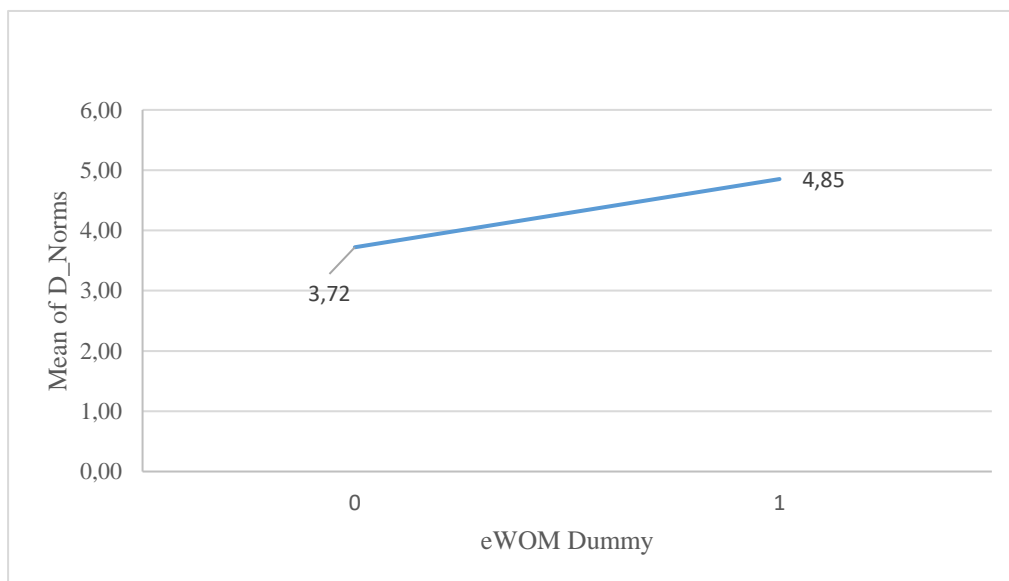
D_Norms

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.645	1	53.645	36.222	<.001
Within Groups	245.845	166	1.481		
Total	299.489	167			

ANOVA Effect Sizes^a

95% Confidence Interval

		Point		
		Estimate	Lower	Upper
D_Norms	Eta-squared	.179	.085	.280
	Epsilon-squared	.174	.079	.275
	Omega-squared Fixed-effect	.173	.079	.274
	Omega-squared Random-effect	.173	.079	.274



Hypothesis 4

PROCESS macro by Hayes Output

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 beta *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
Y : PI
X : eWOM

M : D_Norms

Sample
Size: 166

OUTCOME VARIABLE:

D_Norms

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4403	.1938	1.4319	39.4292	1.0000	164.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.6838	.1355	27.1881	.0000	3.4162	3.9513
eWOM	1.1685	.1861	6.2793	.0000	.8011	1.5360

Standardized coefficients

	coeff
eWOMDumm	.8794

OUTCOME VARIABLE:

PI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7094	.5033	1.4604	82.5665	2.0000	163.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.2756	.3211	.8584	.3919	-.3584	.9097
eWOM	.9238	.2093	4.4139	.0000	.5105	1.3371
D_Norms	.7013	.0789	8.8928	.0000	.5456	.8570

Standardized coefficients

	coeff
eWOMD	.5421
D_Norms	.5468

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

PI

Model Summary

R	R-sq	MSE	F	df1	df2	p
---	------	-----	---	-----	-----	---

.5121 .2622 2.1557 58.2951 1.0000 164.0000 .0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.8590	.1662	17.1976	.0000	2.5307	3.1872
eWOM	1.7433	.2283	7.6351	.0000	1.2925	2.1941

Standardized coefficients

	coeff
eWOM	1.0230

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
1.7433	.2283	7.6351	.0000	1.2925	2.1941	1.0230

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
.9238	.2093	4.4139	.0000	.5105	1.3371	.5421

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
D_Norms	.8195	.1556	.5168	1.1255

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
D_Norms	.4809	.0876	.3102	.6536

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: Standardized coefficients for dichotomous or multicategorical X are in partially standardized form.

WARNING: Variables names longer than eight characters can produce incorrect output when some variables in the data file have the same first eight characters. Shorter variable names are recommended. By using this output, you are accepting all risk and consequences of interpreting or reporting results that may be incorrect.

----- END MATRIX -----